

Listing and Amendments to the Claims

This listing of claims will replace all previous versions and listings of claims in this application:

1. **(Currently Amended)** A method of embedding a watermark in an information signal which is compressed so as to include first signal samples having a first zero value and second signal samples having a ~~second~~ non-zero value, the method comprising ~~the act of~~ modifying ~~at least one of the first and second signal samples in accordance with [[a]]~~ the watermark pattern to produce a modified signal sample, wherein the ~~act of~~ modifying is applied to ~~at least one of the first and second signal samples only if the~~ modified signal sample equals zero.
2. **(Currently Amended)** The method as claimed in claim 1, wherein the ~~first and~~ second signal samples qualified for modification have the smallest value other than zero.
3. **(Currently Amended)** The method as claimed in claim 1, wherein the first and second signal samples have been quantized with a quantizer step size, and the ~~first and~~ second signal samples qualified for modification are signal samples being quantized with a step size which is less than a predetermined threshold.
4. **(Currently Amended)** The method as claimed in claim 1, wherein the information signal is divided into sections and the number of the ~~first and~~ second signal samples qualified for modification is limited to a predetermined maximum per section.
5. **(Currently Amended)** A method as claimed in claim 4, wherein the first and second signal samples of a section have been quantized in accordance with a quantizer step scale, the method including ~~the act of~~ controlling said maximum of modified signal samples in dependence upon said quantizer step scale.

6. **(Currently Amended)** A method as claimed in claim 1, wherein the information signal is divided into sections and the first and second signal samples of a section have been quantized in accordance with a quantizer step scale, the method including ~~the act of~~ controlling a position of the ~~first and~~ second signal samples qualified for modification within a section in dependence upon said quantizer step scale.

7. **(Currently Amended)** The method as claimed in claim 1, wherein the compressed signal includes variable-length code words each identifying a run of the first and second signal samples, the method further comprising ~~the acts of~~:

decoding the variable-length code words into respective first and second signal samples prior to said modifying act;

merging the modified signal sample with succeeding or preceding first signal samples to obtain a new run of first signal samples, and

encoding the new run of first and second signal samples into a new variable-length code word.

8. **(Currently Amended)** A system for embedding a watermark in an information signal which is compressed so as to include first signal samples having a ~~first~~ zero value and second signal samples having a ~~second~~ non-zero value, the system comprising means for modifying ~~at least one of the first and~~ second signal samples in accordance with ~~[[a]]~~ the watermark ~~pattern~~ to produce a modified signal sample, wherein the modifying means are arranged to modify ~~at least one of the first and~~ second signal samples only if the modified signal sample equals zero.

9. **(Currently Amended)** An application embodied on a computer readable medium configured to control a processor to embed a watermark in an information signal which is compressed so as to include first signal samples having a first zero value and second signal samples having a second non-zero value, the application comprising:

a portion configured to modify ~~at least one of the first and~~ second signal samples in accordance with ~~[[a]] the watermark pattern~~ to produce a modified signal sample; and

a portion configured to produce the modified signal sample only if the modified signal sample equals zero.

10. **(Currently Amended)** The application of Claim 9, wherein the portion configured to produce the modified signal samples is configured to only modify the ~~first and~~ second signal samples having a smallest value other than zero.

11. **(Currently Amended)** The application of Claim 9, comprising a portion configured to quantize the first and second signal samples with a quantizer step size, wherein the portion configured to produce the modified signal samples is configured to only modify the ~~first and~~ second signal samples quantized with a step size which is less than a predetermined threshold.

12. **(Currently Amended)** The application of Claim 9, comprising a portion configured to divide the first and second signal samples into sections, wherein the portion configured to produce the modified signal samples is configured to only modify a predetermined number of the ~~first and~~ second signal samples per section.

13. **(Currently Amended)** The application of Claim 12, comprising a portion configured to quantize the first and second signal samples with a quantizer step scale, wherein the portion configured to produce the modified signal samples is configured to modify the ~~first and~~ second signal samples in dependence upon the quantizer step scale.

14. **(Currently Amended)** The application of Claim 9, comprising:

a portion configured to divide the first and second signal samples into sections;
and

a portion configured to quantize the first and second signal samples with a quantizer step scale, wherein the portion configured to produce the modified signal samples is configured to control a position of the ~~first~~ and second signal samples modified within a section in dependence upon the quantizer step scale.

15. **(Previously Presented)** The application of Claim 9, wherein the compressed signal includes variable-length code words each identifying a run of the first and second signal samples, the application further comprising:

a portion configured to decode the variable-length code words into respective first and second signal samples prior to producing the modified signal samples;

a portion configured to merge the modified signal samples with the first and second signal samples to obtain a new run of the first and second signal samples, and

a portion configured to encode the new run of the first and second signal samples into a new variable-length code word.

16. **(Currently Amended)** The application of Claim 9, wherein the watermark is represented by DCT coefficients and the portion configured to modify the first and second signal samples is configured to modify the ~~first~~ and second signal samples in accordance with a corresponding sign of the watermark DCT coefficients.

17. **(Currently Amended)** The application of Claim 16, wherein the first and second signal samples are represented by DCT coefficients and the portion configured to modify the ~~first~~ and second signal samples is configured to modify a range of signal sample DCT coefficients in accordance with the corresponding sign of the watermark DCT coefficients.

18. **(Previously Presented)** The application of Claim 9, wherein the watermark is represented by DCT coefficients and the portion configured to modify the signal samples is configured to modify the signal samples in accordance with only a plurality of most significant DCT coefficients.

19. **(Previously Presented)** The application of Claim 9, wherein the information signal contains field-coded DCT blocks and frame-coded DCT blocks, and wherein the portion configured to modify signal samples is configured to modify field-coded DCT blocks with a first watermark and is configured to modify frame-coded DCT blocks with a second watermark.